

Solar Supply Chain 2011

Partners Working Toward a Common Goal



www.InovateusSolar.com

About Inovateus Solar

- Founded in 2008 with the mission of promoting the solution to our country's growing energy problems
- Experience in many large-scale photovoltaic installations worldwide
- Inovateus Solar, LLC has put together a strong portfolio of projects that we have supplied the materials for and constructed as well.
- We are capable of supplying products for the highest quality rooftop or ground mount solar electric system at the most competitive price

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About Inovateus Solar

- Some of our clients:
 - Dayton Power & Light
 - General Electric
 - Marathon Oil
 - Schneider Electric
 - Sears Corp
 - UPS
 - Hartz Mountain
 - CBS
 - University of Notre Dame
 - Several other privately held companies



Inovateus Solar

Different Approach to Solar

- Concern for the future
- Grew out of our research and development division
- Worked with industry leaders and have learned what works, then improved how solar is delivered to our clients
- Established industry strategic partnerships
- Finance and investor partnerships



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Different Approach to Solar

- Inovateus Solar is a world-wide distributor of photovoltaic products and a turn-key installer of commercial and industrial solar electric projects
- As a distributor of all photovoltaic products, Inovateus has millions of dollars of credit with dozens of manufacturers



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Module Technology Assessment

- Inovateus Solar is constantly looking for and evaluating new products
- Our team goes to all major solar trade shows each year and evaluates new technologies and products
- Our engineers are constantly reaching out to new manufactures and learning how to design with new products



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Module Technology Assessment

- We also evaluate new inverters and micro inverters for pricing vs. output
- For racking, we keep tight time records for every project in order to compare system install times to cost



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Low Price Negotiations

- Inovateus Solar can have many projects being built at any given time; therefore, we are always in the higher volume price bracket with all of our partners
- Being a large purchaser of modules, we are always guaranteed the highest power class available
- By using the higher power class modules it will bring down the cost per watt of every component of the system



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2010 -2011 Projects Built & Supplied



| | |
|--------------------------|--------------------------------------|
| • Gerreshiemer Glass | 2.8MW |
| • Kari Out Company | 2.4MW |
| • Hartz Mountain | 2.1MW |
| • DTE | 1.25 MW (BCBS, MCCC, Ford) |
| • Dayton Power and Light | 1.1MW |
| • Masser Farms | 1.1MW |
| • Schneider Electric | 1.0MW |
| • Morningstar Realty | 800kW |
| • UPS | 300kW |
| • General Electric | 100kW Solar Carport with EV Chargers |

* We have project profiles on our website available to download

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Distribution Capabilities

Panels

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There are many other manufactures not listed that we are currently working with.

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Types of Solar Panels

Thin-Film



Solyndra



Crystalline



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- **2011 panel availability for popular manufactures (Schott, Kyocera, Sharp, etc.)**
 - Q2 and Q3 have been allocated for.
 - Higher power class modules are on limited supply.
 - What does this mean for the PV market?
 - How will it affect project timeline?
- **2011 inverter availability**
 - Inverters are available with a 4-6 week lead time for custom orders.
- **Open market for new products**
 - What is the risk involved with purchasing from a startup?

Sources: OTR Global

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- The big news in the solar industry is the dramatic price drop in modules!
- Second Quarter 2011 crystalline and thin-film PV prices dropped 15%-20%, much sharper than anticipated in March



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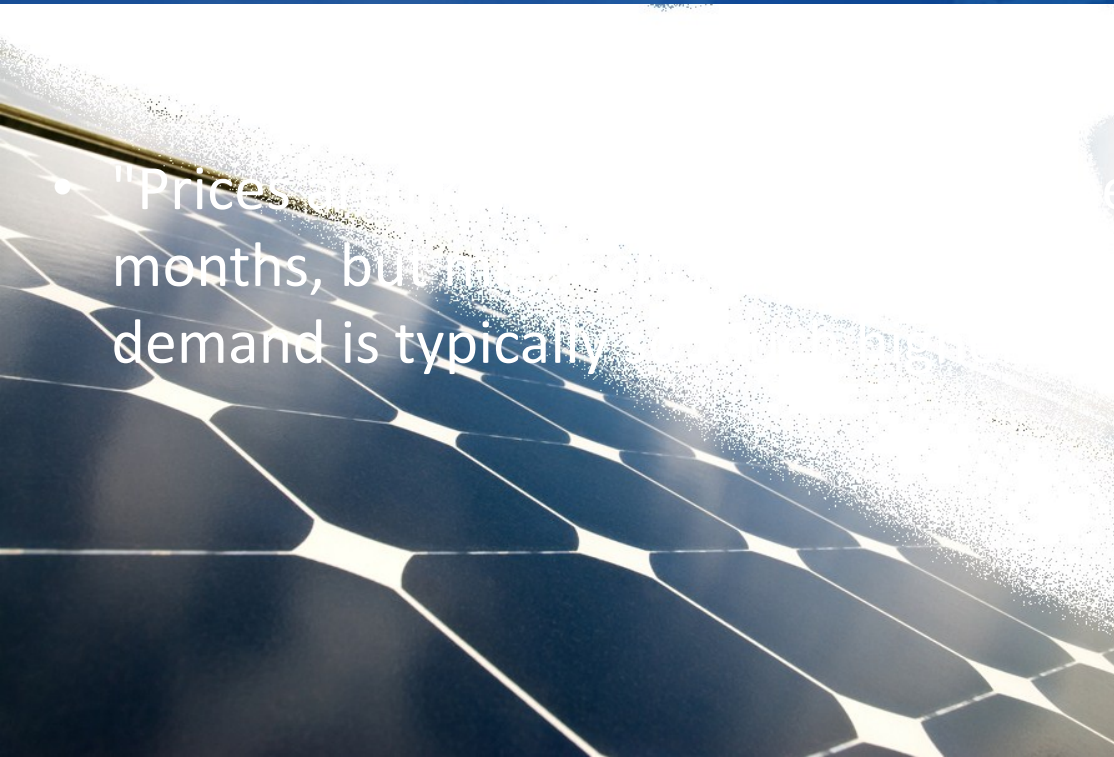
- Despite scant buying activity in Second Quarter, Tier-1 Chinese crystalline manufacturers like Yingli Green Energy Holding Co. Ltd., Trina Solar Ltd. and Suntech Power Holdings Co. Ltd. improved share gains with low pricing and flexible credit provisions.
- Japanese and European manufacturer prices did not budge enough,

- 
- Sources were confident in the continued ability to supply demand for thin-film's lower efficiency, especially with

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Industry Quotes (sources are solar integrators and distributors)

- "Suntech and Yingli are willing to make all kinds of concessions to move product. We're getting \$1.42 per watt delivered ... in effect, that's like getting it for \$1.39 per watt because they're waiving a lot of charges, including payments for port clearance and shipment to



- "Price is still high, but it's coming down in the next few months, but demand is typically high."

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- "We're planning to shift to buying more in the spot market as prices are dropping. We've even heard one as low as \$1.35 per watt from someone desperate to move inventory."
- "Prices are in the \$1.50s, but manufacturers are trying to bury this as much as possible ... they're talking about these prices as short-



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- "At the beginning of the year, we projected prices would drop 5¢-10¢ per quarter, and cuts have exceeded those projections so far. I'd say lowest bidders will be \$1.45-\$1.47 per watt by Q4."
- "Both Suntech and **LG [Electronics Inc.]** are in the mid \$1.50s [in 2Q11] -- a big drop from last quarter when LG was as high as



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- What does this mean for the industry?
 1. Better Return on Investment
 2. Chances to talk to old customers with new pricing
 3. Revitalize old opportunities
 4. This year is the perfect storm



Thank You

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